FIG. 1
(PRIOR ART)

FIG. 4
(PRIOR ART)

FIG. 6
(PRIOR ART)
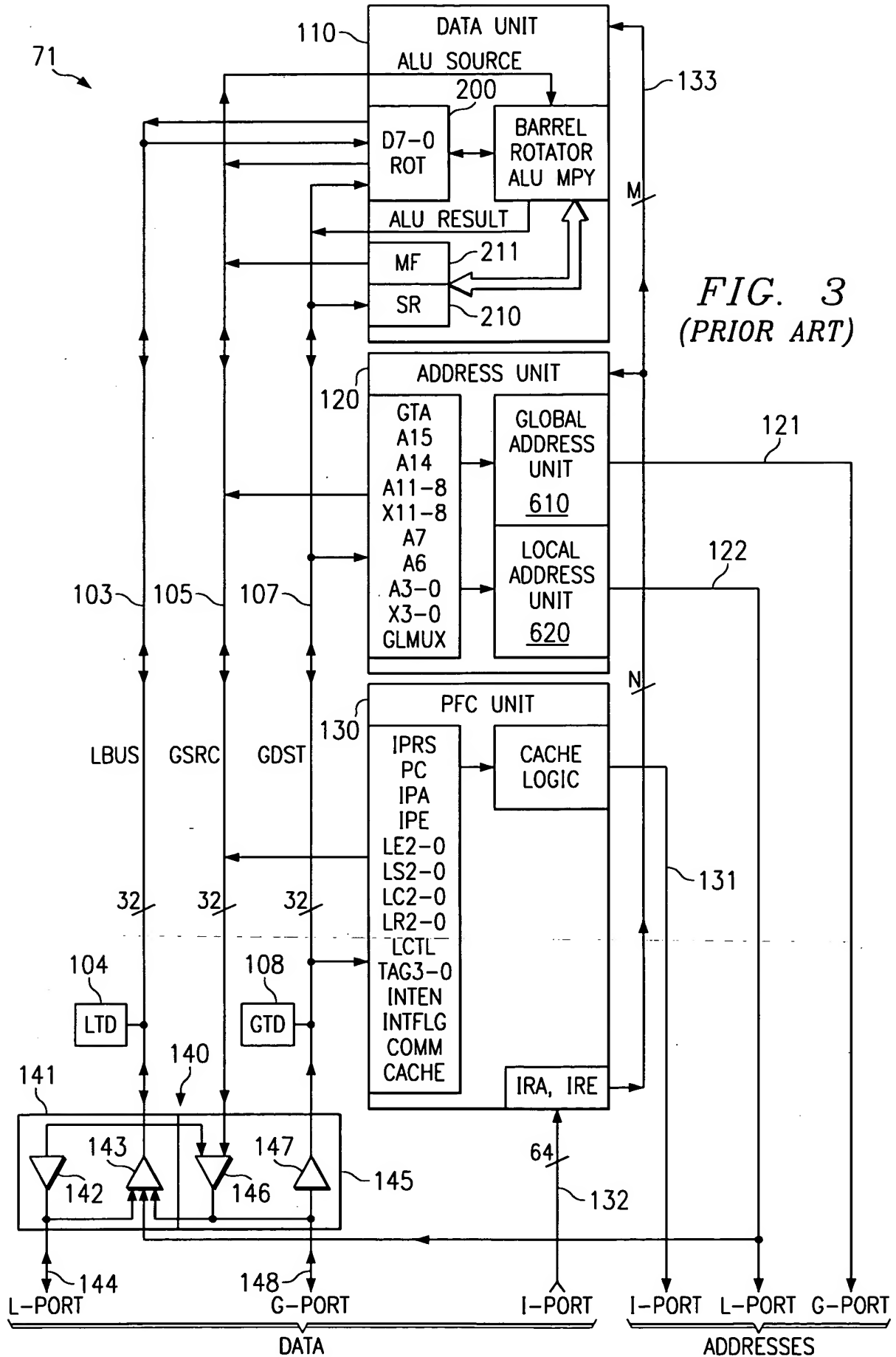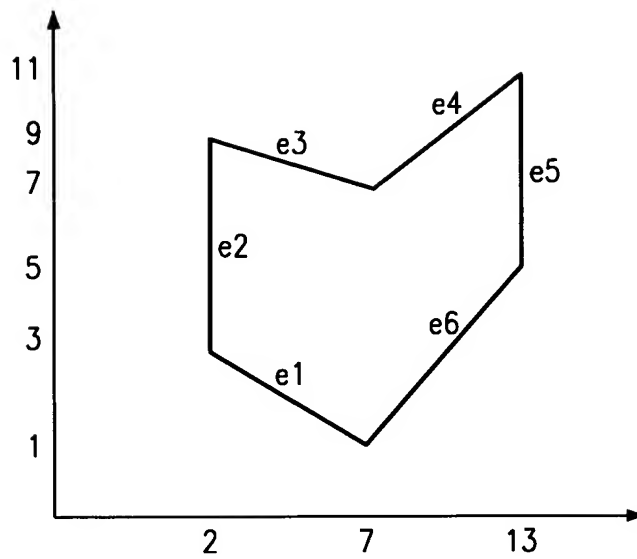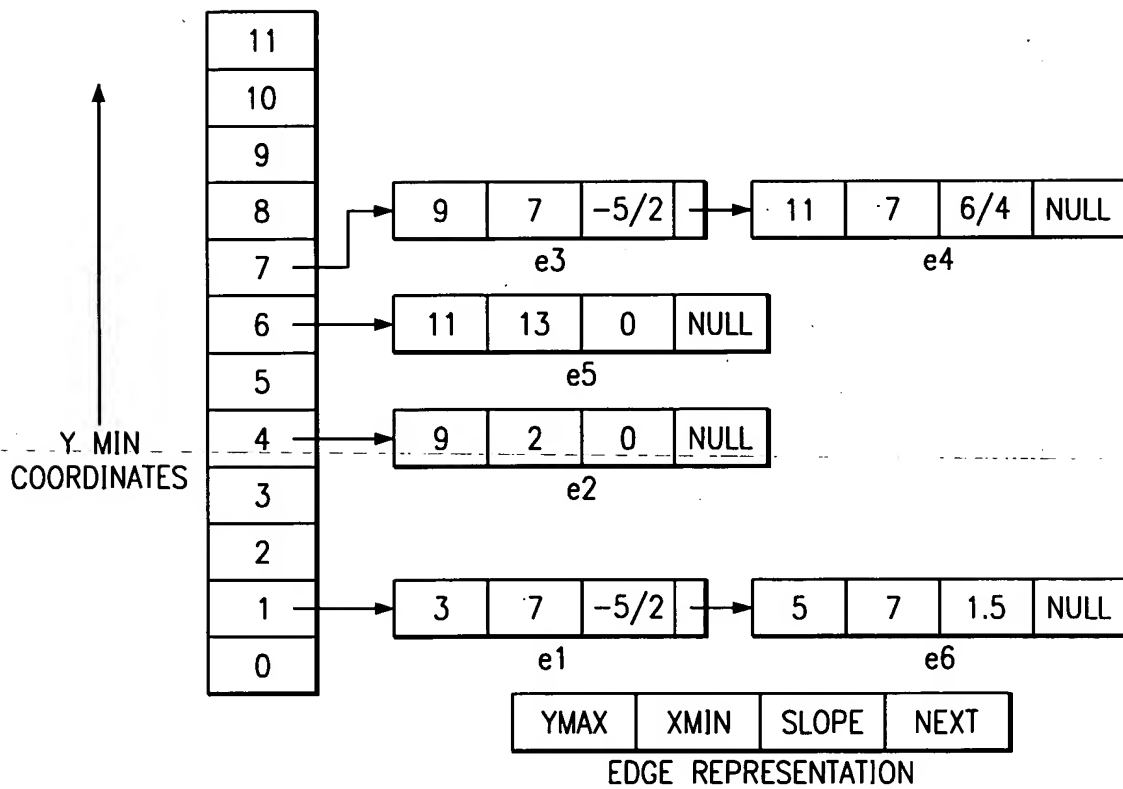

FIG. 7
(PRIOR ART)

FIG. 2
(PRIOR ART)

FIG. 3
(PRIOR ART)

FIG. 5
(PRIOR ART)

FIG. 8

FIG. 9
(PRIOR ART)

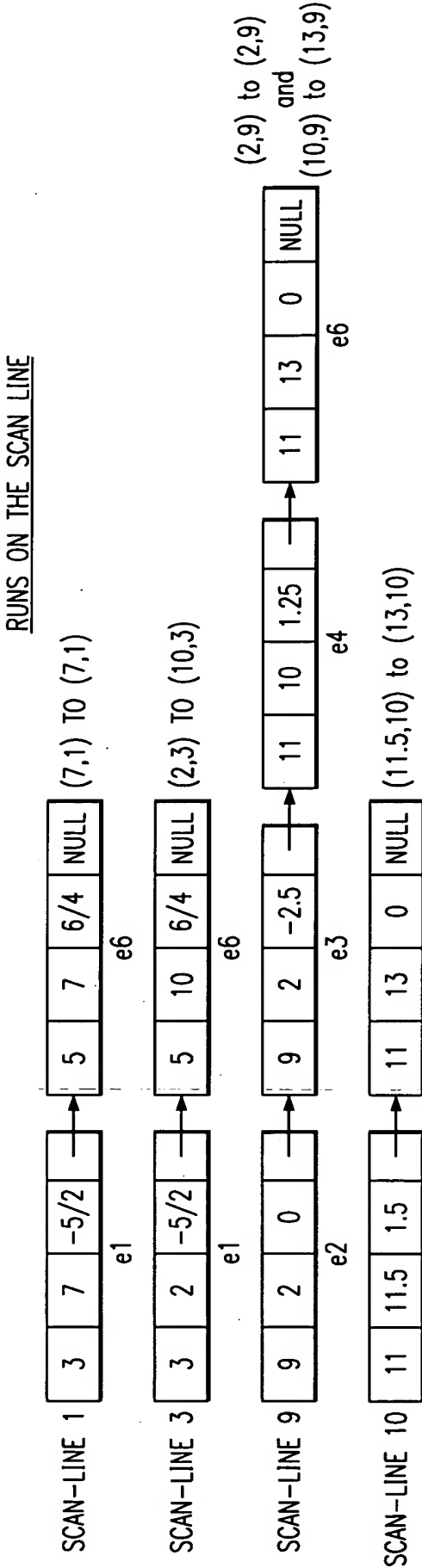RUNS ON THE SCAN LINE

SCAN-LINE 1	3	7	-5/2	→	5	7	6/4	NULL	(7,1) TO (7,1)

e1   e6

SCAN-LINE 3	3	2	-5/2	→	5	10	6/4	NULL	(2,3) TO (10,3)

e1   e6

SCAN-LINE 9

9	2	0	→	11	10	1.25	→	11	13	0	NULL

e2   e3   e4   e6

(2,9) to (2,9)
and
(10,9) to (13,9)

SCAN-LINE 10	11	11.5	1.5	→	11	13	0	NULL	(11.5,10) to (13,10)

FIG. 10
(PRIOR ART)

EDGE e1	EDGE e6	EDGE e2	EDGE e5	EDGE e3	EDGE e4
YMIN 1 XBOTTOM 7 YMAX 3 SLOPE -5/2	YMIN 1 XBOTTOM 7 YMAX 5 SLOPE 6/4	YMIN 3 XBOTTOM 2 YMAX 9 SLOPE 0	YMIN 5 XBOTTOM 13 YMAX 11 SLOPE 0	YMIN 7 XBOTTOM 7 YMAX 9 SLOPE -5/2	YMIN 7 XBOTTOM 7 YMAX 11 SLOPE 6/4

AET POINTER →
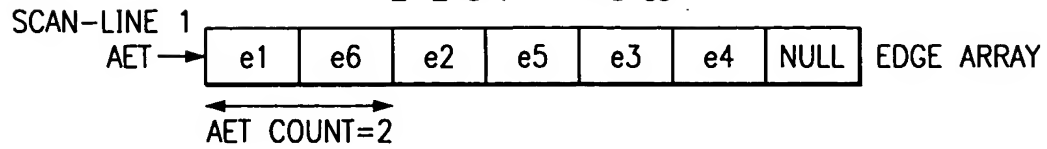
EDGE ARRAY

FIG. 11

FIG. 12a

SCAN-LINE 1
AET →

| e1 | e6 | e2 | e5 | e3 | e4 | NULL | EDGE ARRAY

AET COUNT=2

FIG. 12b

SCAN-LINE 4
AET →

| e2 | e6 | e2 | e5 | e3 | e4 | NULL | EDGE ARRAY

AET COUNT=2

FIG. 12c

SCAN-LINE 9
AET →

| e2 | e3 | e4 | e5 | e3 | e4 | NULL | EDGE ARRAY

AET COUNT=4

FIG. 13a
(PRIOR ART)

p3   p4
p2
p1   p5
     p6
p8   p7
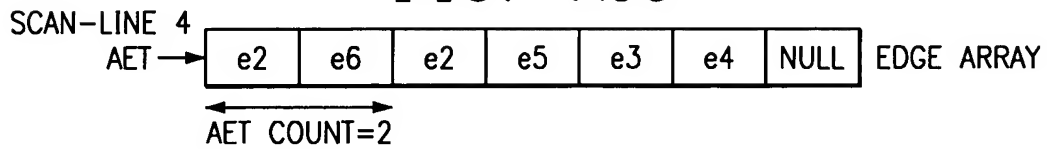
CLIP WITH
LEFT EDGE
→
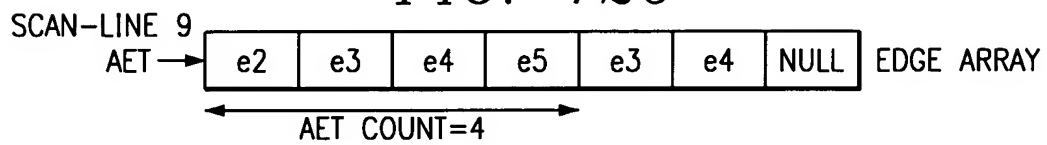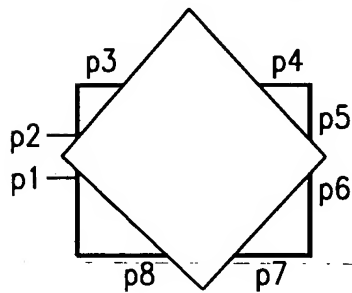
FIG. 13b
(PRIOR ART)
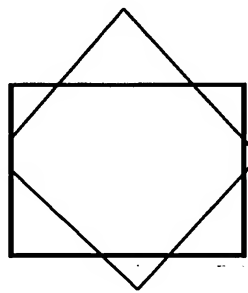
CLIP WITH
TOP EDGE
→
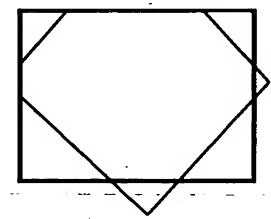
FIG. 13c
(PRIOR ART)

CLIP WITH
RIGHT EDGE
↓

SQUARE=CLIP POLYGON
DIAMOND=SUBJECT POLYGON

CLIP WITH
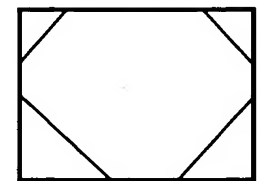BOTTOM EDGE
←

FIG. 13e
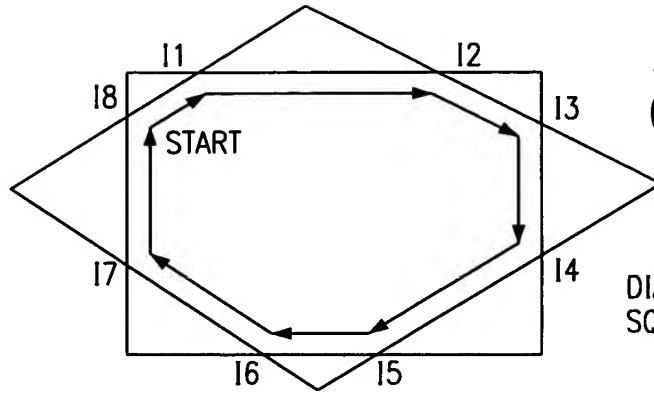### (PRIOR ART)
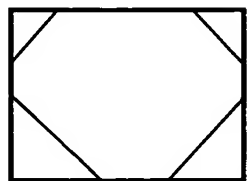
FIG. 13d
(PRIOR ART)

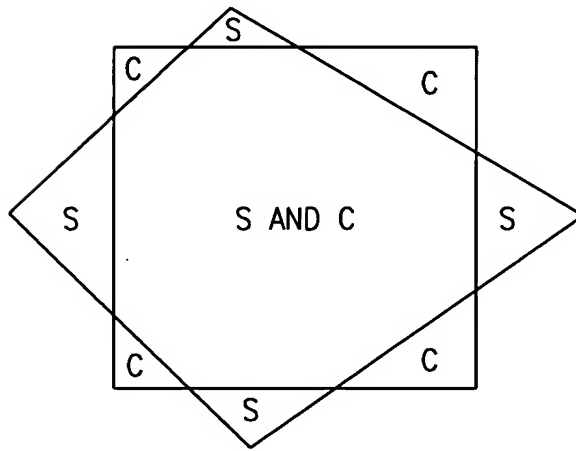FIG. 14
(PRIOR ART)

DIAMOND=SUBJECT POLYGON
SQUARE=CLIP POLYGON
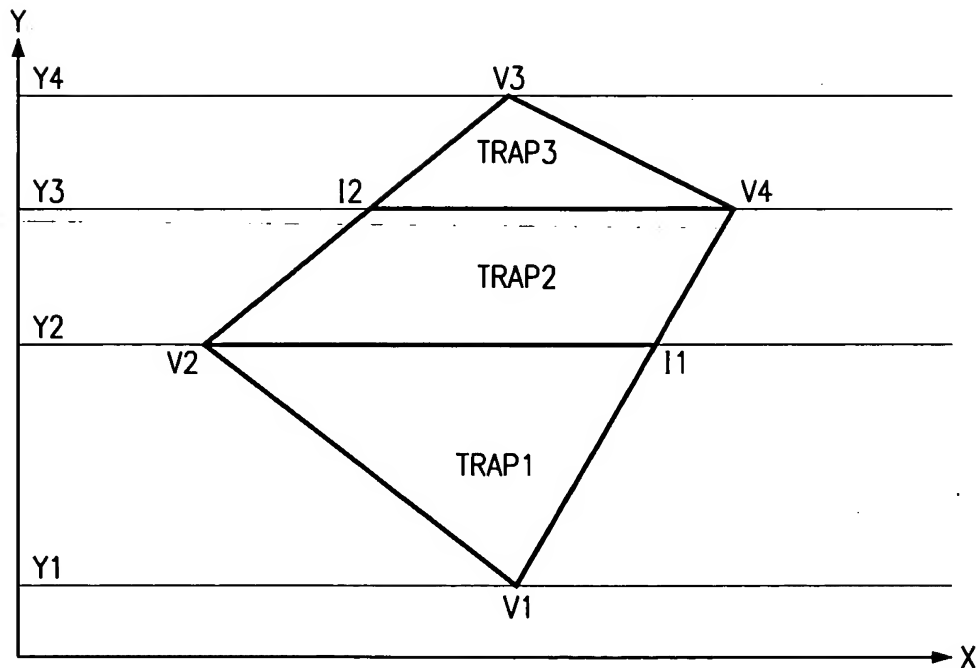

FIG. 15
(PRIOR ART)
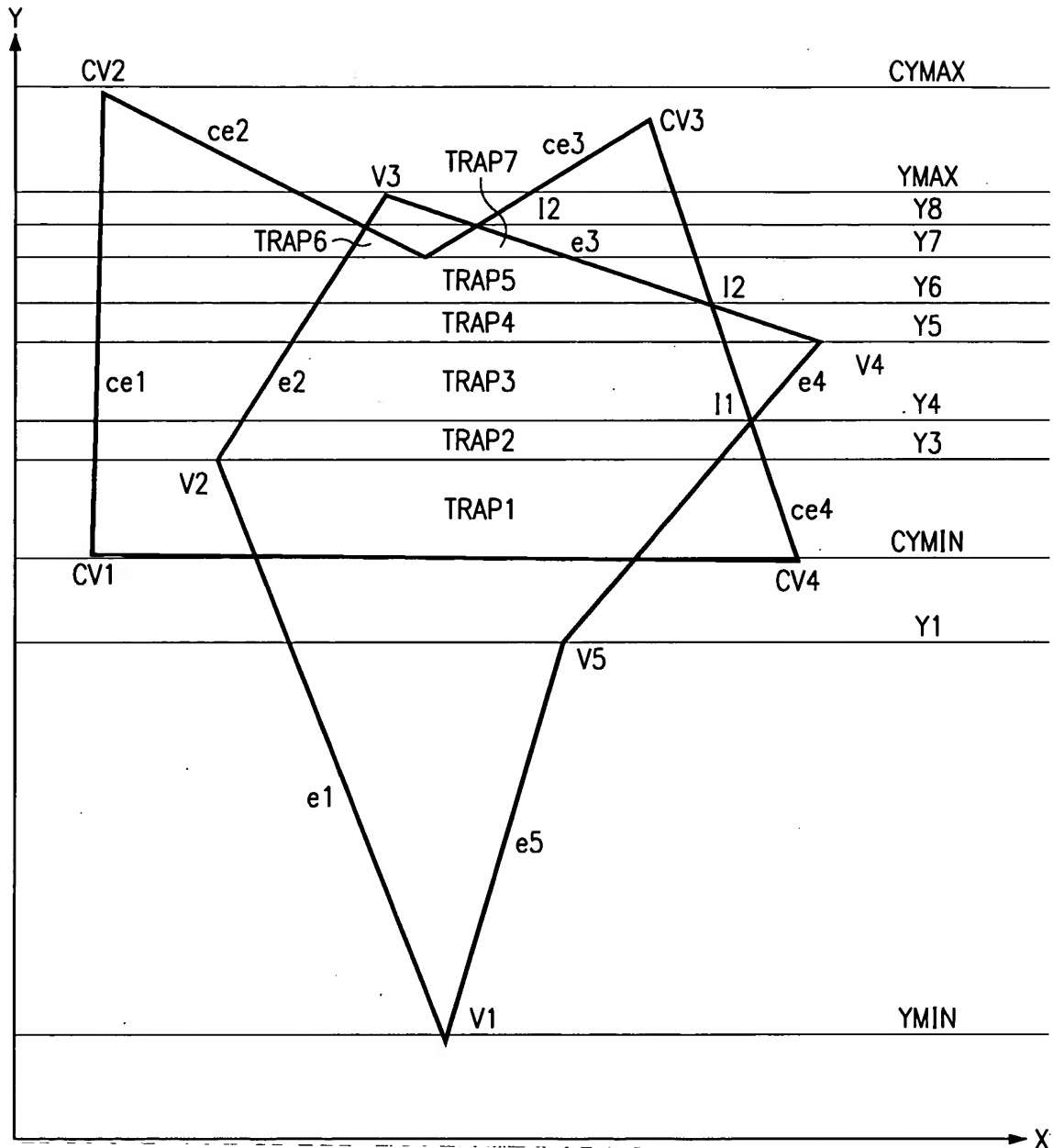
S=SUBJECT POLYGON
C=CLIP POLYGON

FIG. 16
(PRIOR ART)

FIG. 17

CE1 x1 | CE4 x2 AET OF CLIP POLYGON AT SCANLINE CYMIN

E1 x3 | E4 x4 AET OF SUBJECT POLYGON AT SCANLINE CYMIN

x1,x2,x3,x4 XBOTTOM VALUES OF RESPECTIVE EDGES.

FROM FIGURE 17, x1<x3 AND x2>x4
xleft=MAXIMUM (x1,x3) i.e. EDGE E1
xright=MINIMUM (x2,x4) i.e. EDGE E4

FIG. 18

AETs AT SCANLINE Y7

| ce1 xb1 | ce2 xb2 | ce3 xb3 | ce4 xb4 | ✕ |

| e2 xb5 | e3 xb6 | ✕ |

xb1...xb6 ARE RESPECTIVE XBOTTOMS
OF THE EDGES IN THE AETs

FROM FIGURE 17, xb1<xb5 AND xb4>xb6
xleft=MAXIMUM (xb1,xb5) i.e. EDGE ce1
xright=MINIMUM (xb2,xb6) i.e. EDGE ce2

SECOND TRAPEZOID IS POSSIBLE AS THE AETs DID NOT REACH THE END OF LIST
xleft=MINIMUM (xb3,xb6) i.e. EDGE ce3
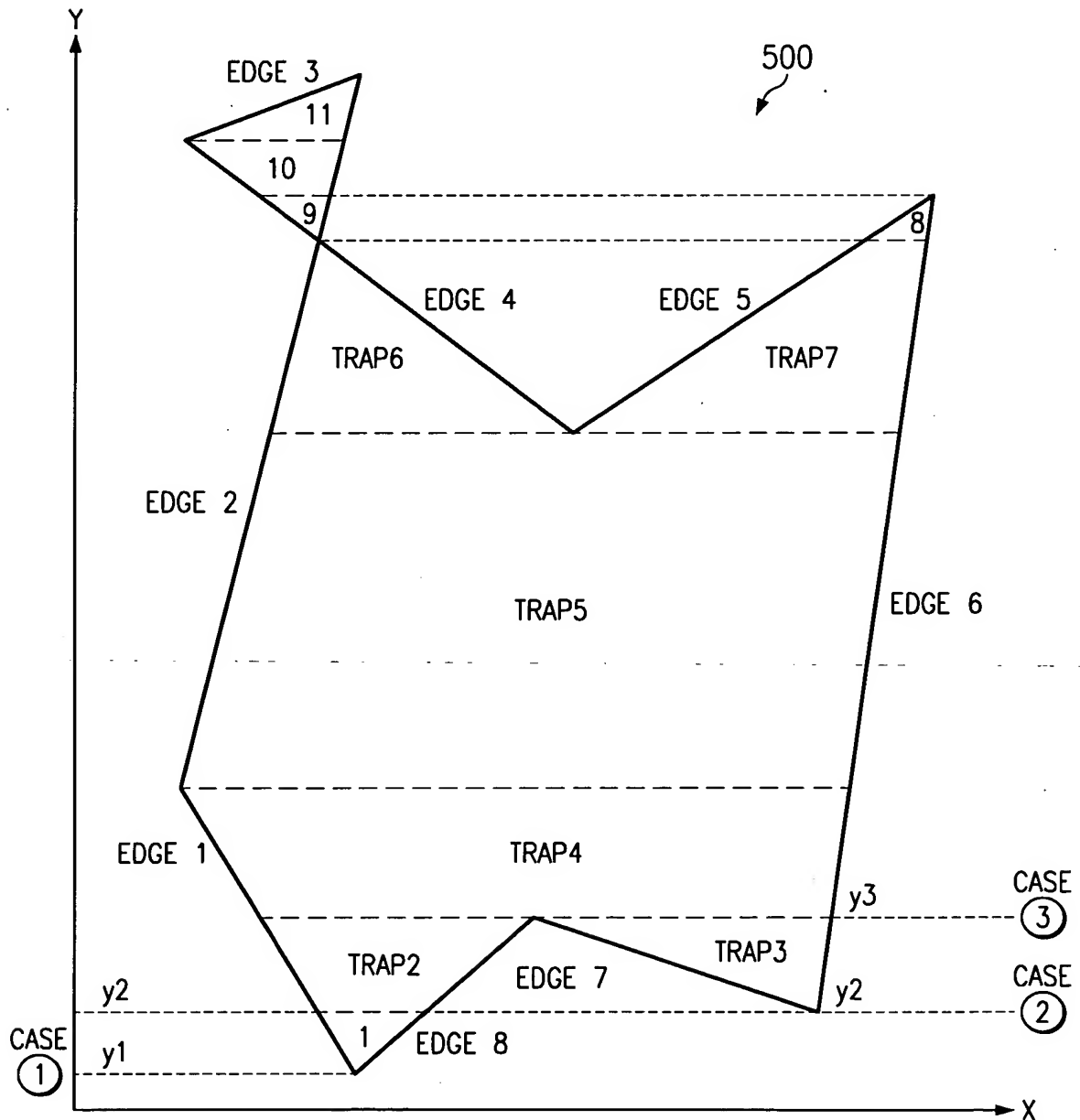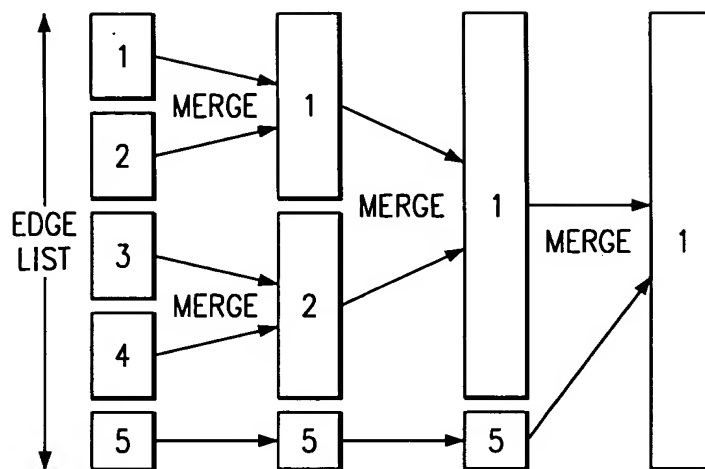xright=MINIMUM (xb4,xb6) i.e. EDGE e3
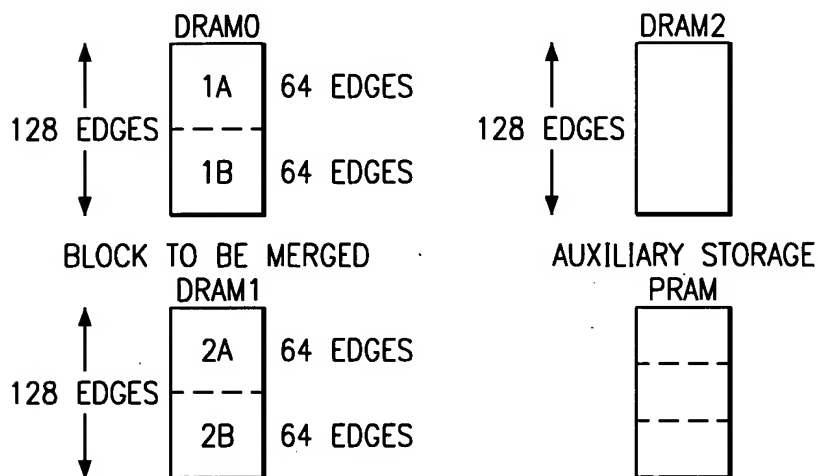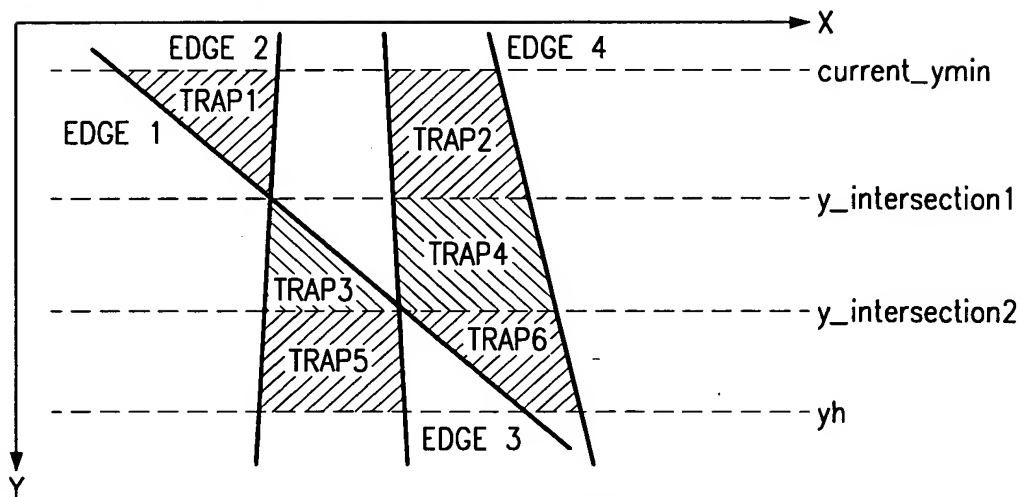
FIG. 19

FIG. 20

FIG. 21

DRAM0

| 1A | 64 EDGES |
| 1B | 64 EDGES |

128 EDGES

BLOCK TO BE MERGED

DRAM1

| 2A | 64 EDGES |
| 2B | 64 EDGES |

128 EDGES

DRAM2

128 EDGES

AUXILIARY STORAGE

PRAM

FIG. 22

FIG. 23
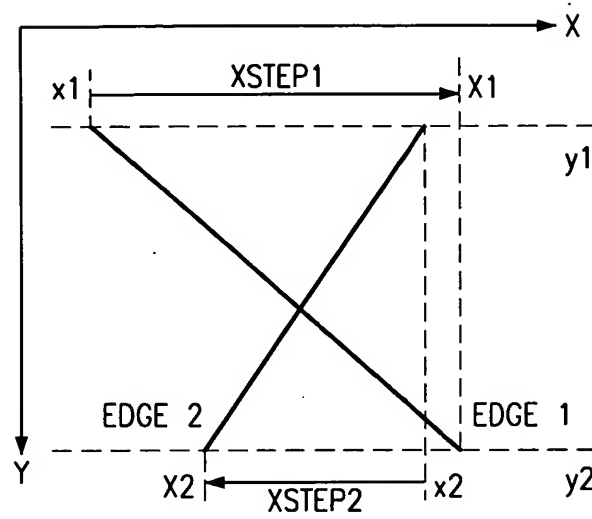
FIG. 24
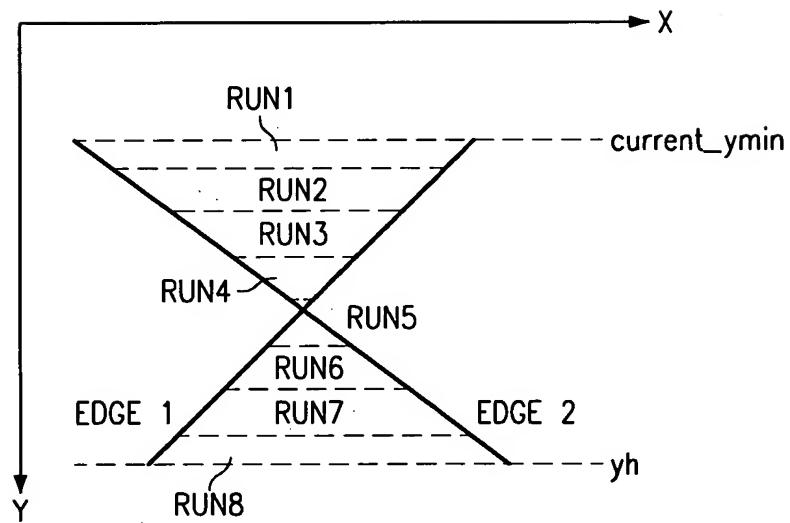
FIG. 25
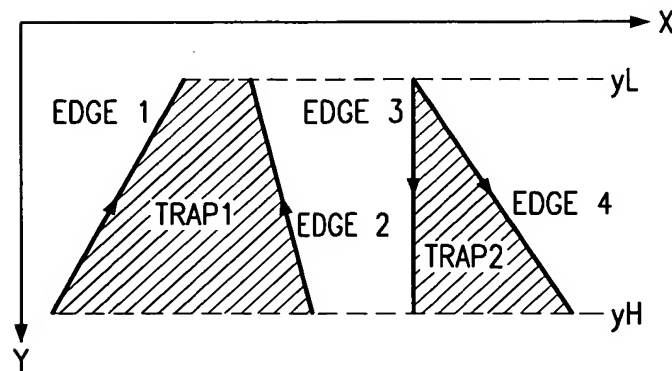
AET(EDGE TABLE)	EDGE 1	EDGE 2	EDGE 3	EDGE 4

FIG. 26

FIG. 27

FIG. 28